Clark County

Mosquito Control District

2004

ADULT MOSQUITO SURVEILLANCE REPORT

Clark County Mosquito Control District

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Adult Mosquito Surveillance 2004 Report

Preparing for Emergence of Mosquito-Borne Viruses by Sampling, Trapping, and Testing

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Mosquito Control Surveillance Program

Introduction

Reported by
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November 2004

The surveillance program consists of three major components: larva sampling, adult mosquito trapping and testing for West Nile virus.

Larva sampling is done on a daily basis by the crew. Larva samples are returned to the shop where genus and species are identified. This information is used to alert the crew of possible health risks to the public, and also helps to define treatment priorities.

Adult mosquito trapping is done as reports of adults are received either by the crew or the public. Traps are set in problem areas, and the trapped mosquitoes are then counted and identified. This information is an indication of the population density in a given area, and identifies the habitat that may be causing the problem. This information will also help to determine the treatment plan for a given area.

West Nile virus testing is done when a number of the suspect mosquitoes (Culex pipiens or Culex tarsalis) are found in the adult trapping program. The staff is capable of testing for the virus in the shop as soon as the Culex mosquitoes are identified. The *VecTest* kit manufactured by Medical Analysis Systems, Inc. is utilized. If a sample is found to test positive, the Health Department is alerted and a pool of the mosquitoes are sent to a lab for confirmation of the results. The early identification of the virus will help alert and educate the public about precautions that should be taken for their personal protection.

The goal of this report is to document the correlation of mosquitoes found to river levels, weather conditions, habitats, and treatment regimens. It is intended that future reports be prepared in timeline format. Suggestions are welcomed about how best to present the information gathered each year.

Questions concerning the information in this report may be directed by e-mail to Chuck Skov or to Steve Kessler at ccmcd@pacifier.com.

Section
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Mosquito Trapping

Mosquito Species Found in Clark County

The following is a brief description of the mosquitoes most often found in Clark County. Twelve species of mosquitoes were identified this year. The eight listed below constitute the majority of the mosquitoes trapped in this year's surveillance program.

Aedes vexans

This species occurs in all types of floodwater situations including temporary pools formed along flooded woodland river bottoms, irrigated pastures, roadside ditches, etc. Females are vicious day and night biters, flying great distances to feed on large mammals, including man. They are considered a local major pest and known vector of canine heartworm and can carry West Nile virus.

Aedes increpitus

Larvae are found in early spring in stream flood pools, rain and snowmelt pools. Females can be found in large numbers in wooded areas near larval habitats. They are persistent biters and readily attack man and cattle. There is no known medical importance with increpitus.

Ochlerotatus sticticus

Larvae are found in flood pools in river valleys and rain pools containing dead leaves in both open and woodland situations. Females are persistent biters most active in the early evening near suitable habitats but have been known to migrate several miles. Like the vexans they can carry WNV but are lesser vectors of the disease.

Culex pipiens

Larvae occur in a variety of foul water sources which are high in organic content (i.e., septic tanks, dairy ponds, catch basins, etc.). Adult females are capable of over-wintering. Females feed at dusk or later, readily entering dwellings to do so, prefer avian hosts, although they may feed on large mammals, including man. This species is a known vector of WNV and SLE (St. Louis Encephalitis).

Culex tarsalis

Larvae occur in practically all freshwater sources, but are commonly associated with agricultural sources. Adult females are capable of over-wintering. Females are night feeders, predominately on birds, but will switch to mammals (including man) after the nesting season. This species is a known vector of WNV, SLE, and WEE (Western Equine Encephalitis).

Culiseta incidens

Larvae and adults are most abundant during the cooler months of the year. Breeding sources include brackish water, snow pools, artificial containers, etc. Adult females are capable of over-wintering. Females actively feed at dawn and dusk on a variety of mammals (including man) and are occasionally considered localized pests. No known diseases are associated with this species.

Culiseta particeps

Larvae occur in shaded clear pools containing algae, leaves, and other debris. Adult females are capable of over-wintering. Females prefer large mammals and may feed on man in shaded places. Adult populations are seldom abundant enough to create a nuisance problem. There is no known disease potential with this species.

Anopheles punctipennis

Larvae occur in clear algae-laden shaded pools along streams and rivers, including the heavily vegetated margins of slow flowing streams. Adult females are capable of over-wintering. Females are night biters, mostly on large mammals, and will attack man outdoors but do not readily enter dwellings to do so. This species can be a vector of human malaria.

2004 Identified Species

The top table on the next page indicates the species of mosquitoes that were identified during the 2004 season. These are the samples that are brought back to the shop after surveying or trapping a site.

	Aedes Vexans	Aedes Cinereus	Ochlerotatus Sticticus	Ochlerotatus Sierrensis	Ochlerotatus Increpitus	Culex Pipiens	Culex Tarsalis	Culex Territans	Anopheles Freeborni	Anopheles Punctipennis	Culiseta Inornata	Culiseta Incidens	Culiseta Particeps	Coquillettidia Perturbans
2001	x		x	x	x	x	x	x	x	x	x	x	x	x
2002	x	x	x		x	x	x		x	x	x	x	x	x
2003	x		x	x	x	x	x	x	x	x	x	x		x
2004	x	x	x		x	x	x	x	x	x		x	x	x

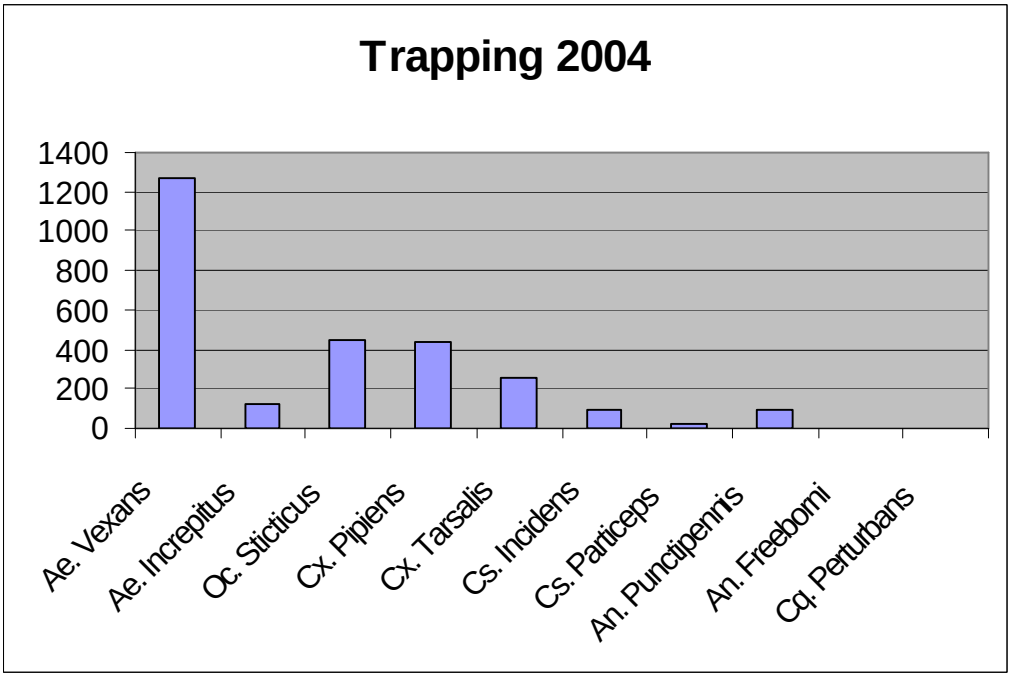
Trapping Graphs

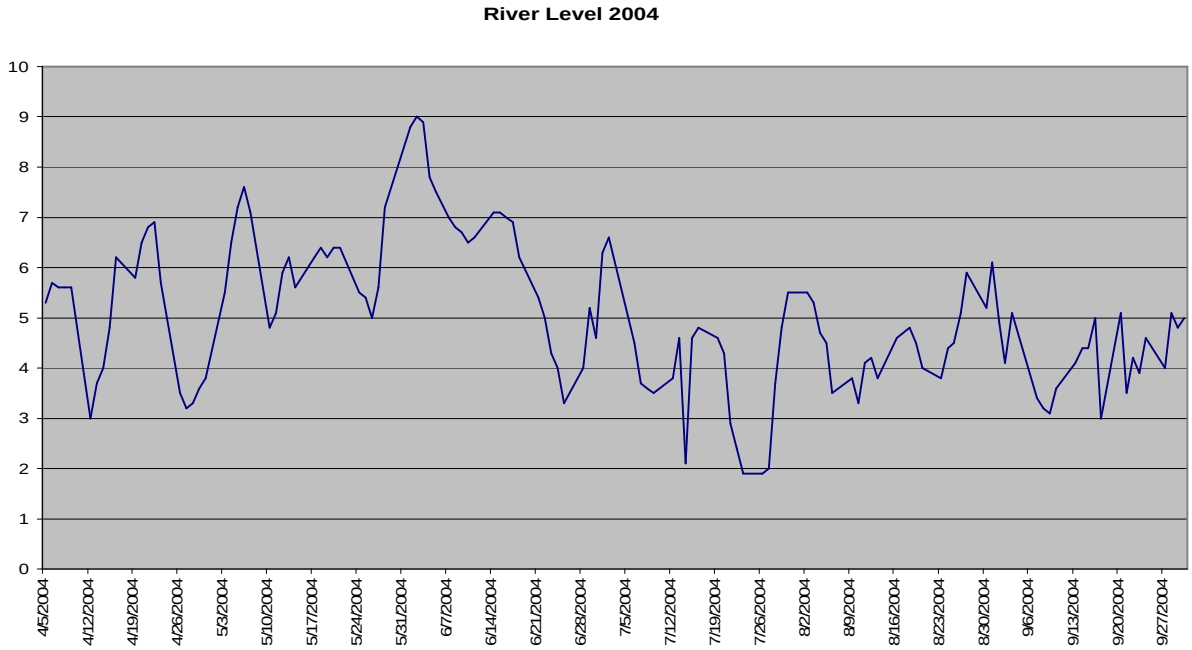
This section explains the adult mosquito trapping activity in 2004. The information shown represents the total number of mosquitoes identified in trapping efforts. The first chart below breaks down the trapping by month, and lists the species and the number of each species found. The graph following the chart reflects the total number of mosquitoes identified during the year.

The four following pages break down the trapping effort by month. A river level graph is included for each month, showing the relationship between the river level and the predominant mosquito present during the month. A brief explanation at the top of the page describes crew activities and direction of efforts during the month.

Approximately 8500 mosquitoes were collected in 2004; 2,732 were identified and are listed in the table below. The parenthetical number following the name of each month represents the number of traps set that month.

	May (1)	**June (16)**	**July (12)**	**Aug (8)**	**Sept (8)**	**Total**
SPECIES						
Ae. Vexans		730	367	125	48	**1270**
Ae. Increpitus	48	43	19	10	2	**122**
Oc. Sticticus		280	125	26	12	**443**
Cx. Pipiens		70	188	122	54	**434**
Cx. Tarsalis		114	127	5	4	**250**
Cs. Incidens		6	69	11	3	**89**
Cs. Particeps		18		2	2	**22**
An. Punctipennis		31	44	5	14	**94**
An. Freeborni		4		1		**5**
Cq. Perturbans			3			**3**

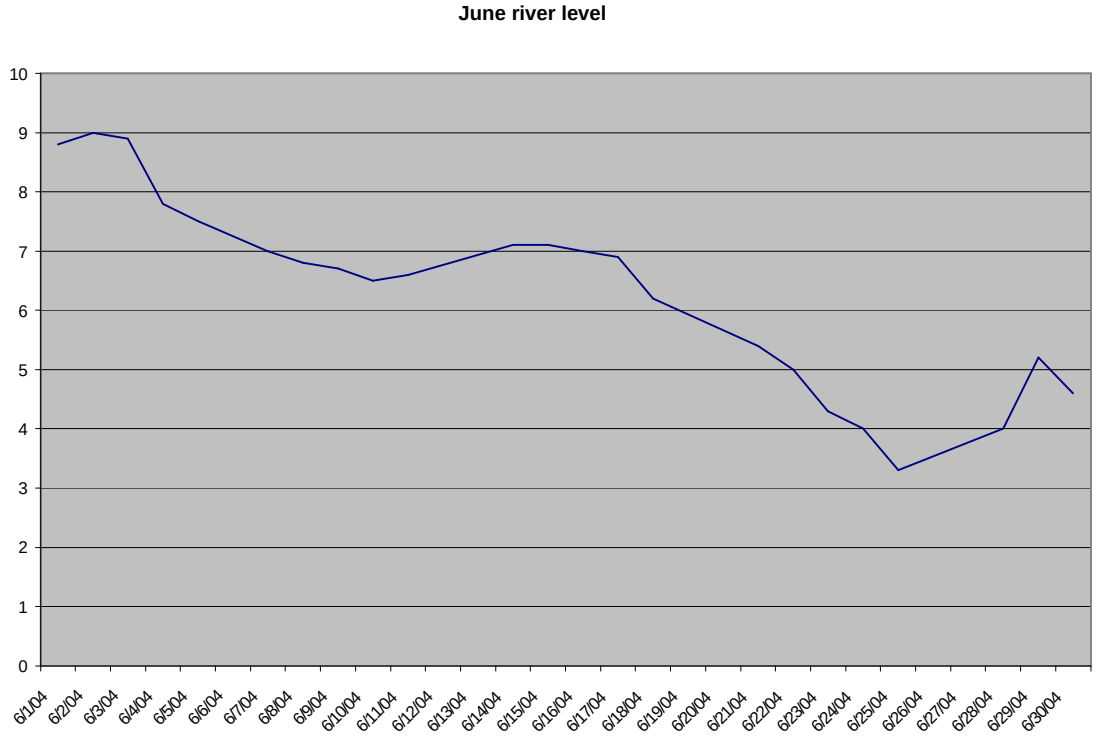

Trapping 2004
1400
1200
1000
800
600
400
200
0
Ae. Vexans
Ae. Increpitus
Oc. Sticticus
Cx. Pipiens
Cx. Tarsalis
Cs. Incidens
Cs. Particeps
An. Punctipennis
An. Freeborni
Cq. Perturbans

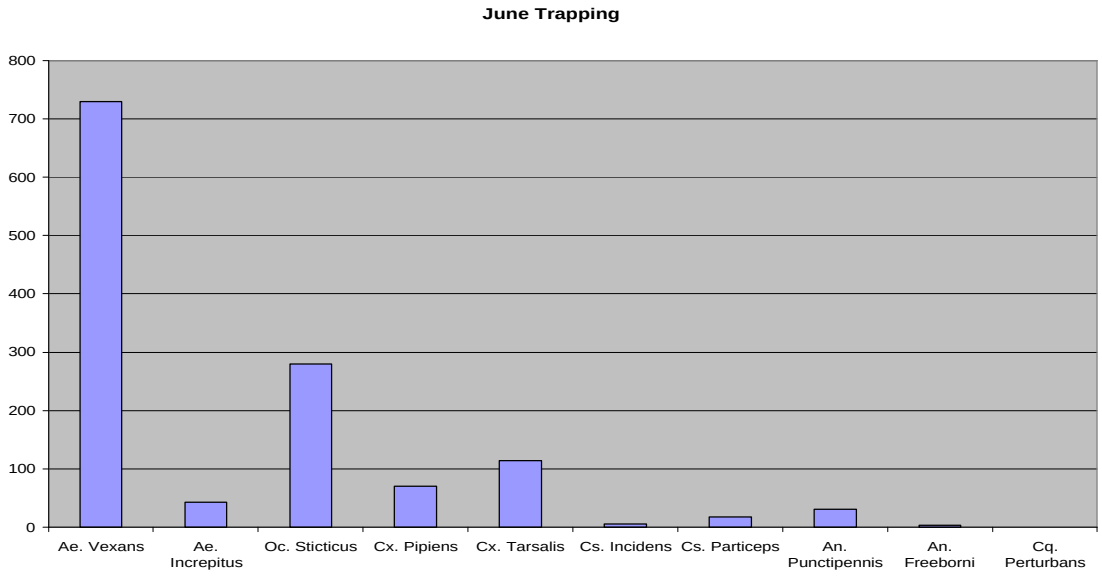

River Level 2004
10
9
8
7
6
5
4
3
2
1
0
4/5/2004
4/12/2004
4/19/2004
4/26/2004
5/3/2004
5/10/2004
5/17/2004
5/24/2004
5/31/2004
6/7/2004
6/14/2004
6/21/2004
6/28/2004
7/5/2004
7/12/2004
7/19/2004
7/26/2004
8/2/2004
8/9/2004
8/16/2004
8/23/2004
8/30/2004
9/6/2004
9/13/2004
9/20/2004
9/27/2004

2004 Monthly Activity

June

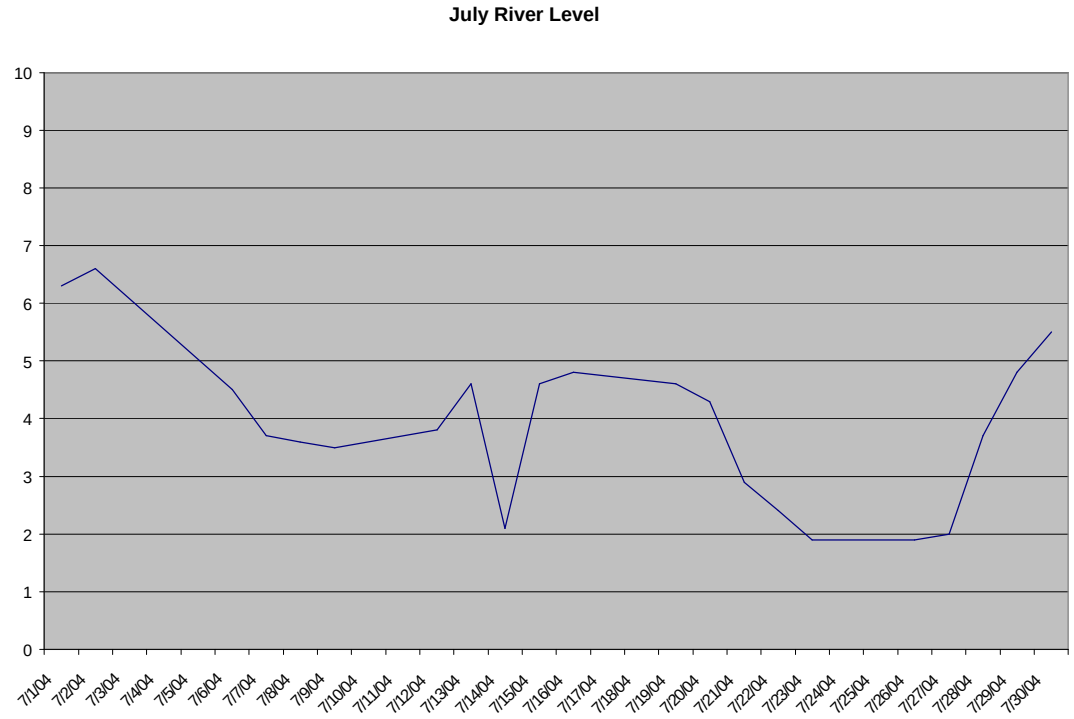
The county experienced the high water mark of the year in June, leading to a large hatch of floodwater mosquitoes. As the trapping chart shows, very few Culex mosquitoes were present at this time. The majority of crew efforts were directed to the floodwater mosquito problem. The water level stayed high a large part of the month, and repeat hatchings of floodwater mosquitoes kept the crew very busy.

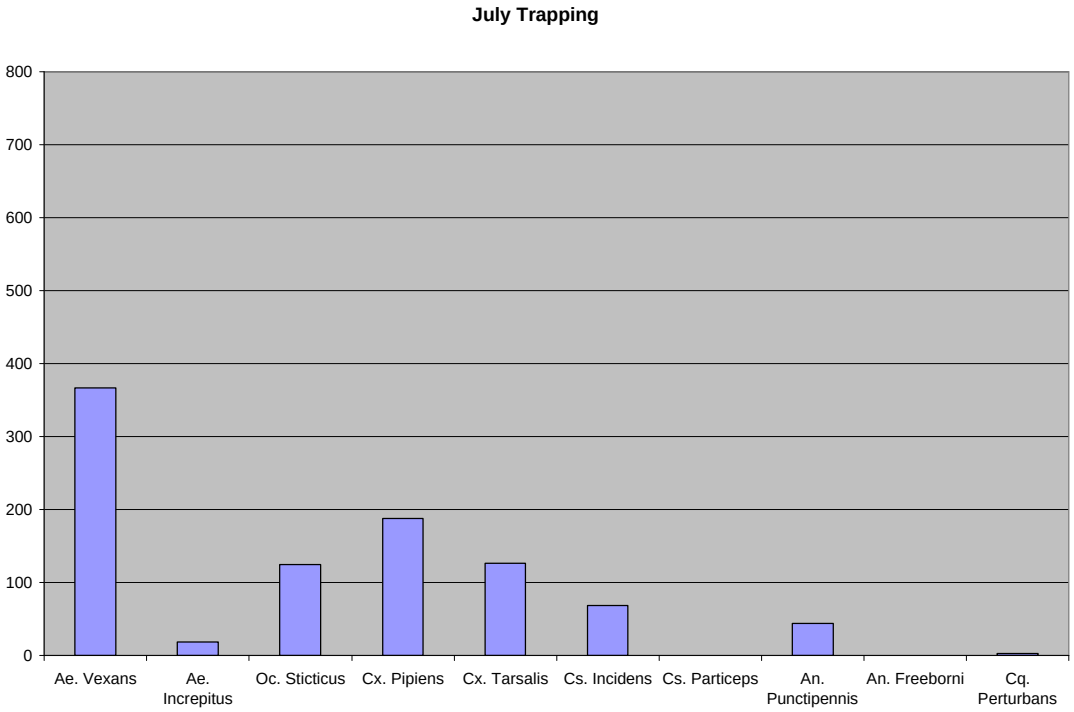




July 2004

July began to present more diverse problems. The trapping chart shows the Culex mosquito beginning to appear. As the river was still up a bit, the floodwater mosquito was still present, but not in the large numbers seen earlier. Retention ponds and other organic-laden pools were getting attention for monitoring and treatment in July.

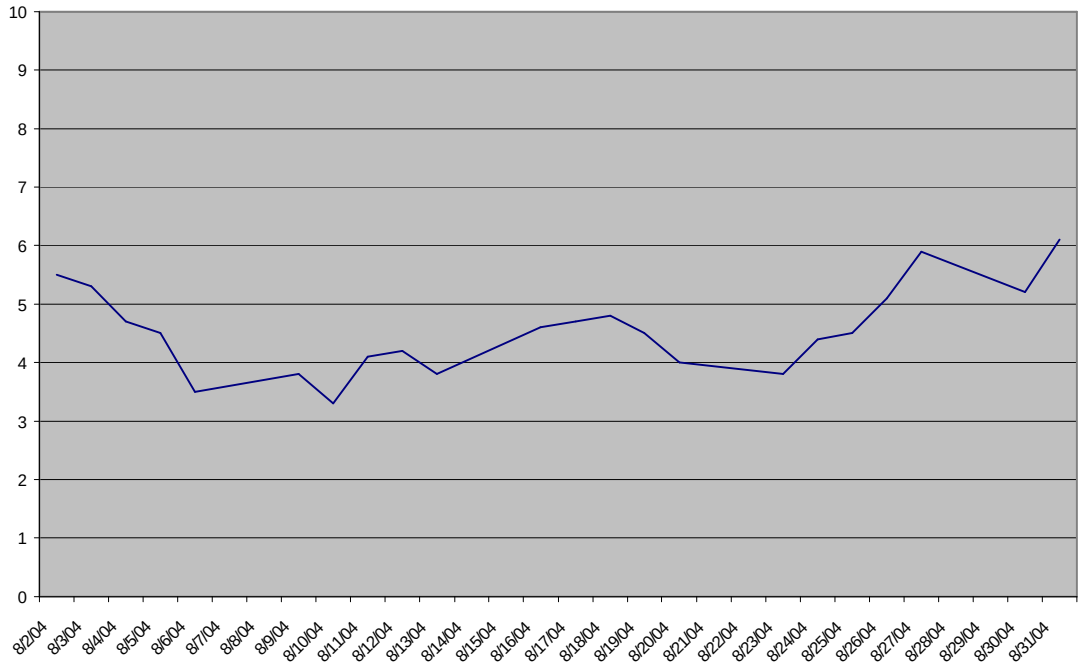




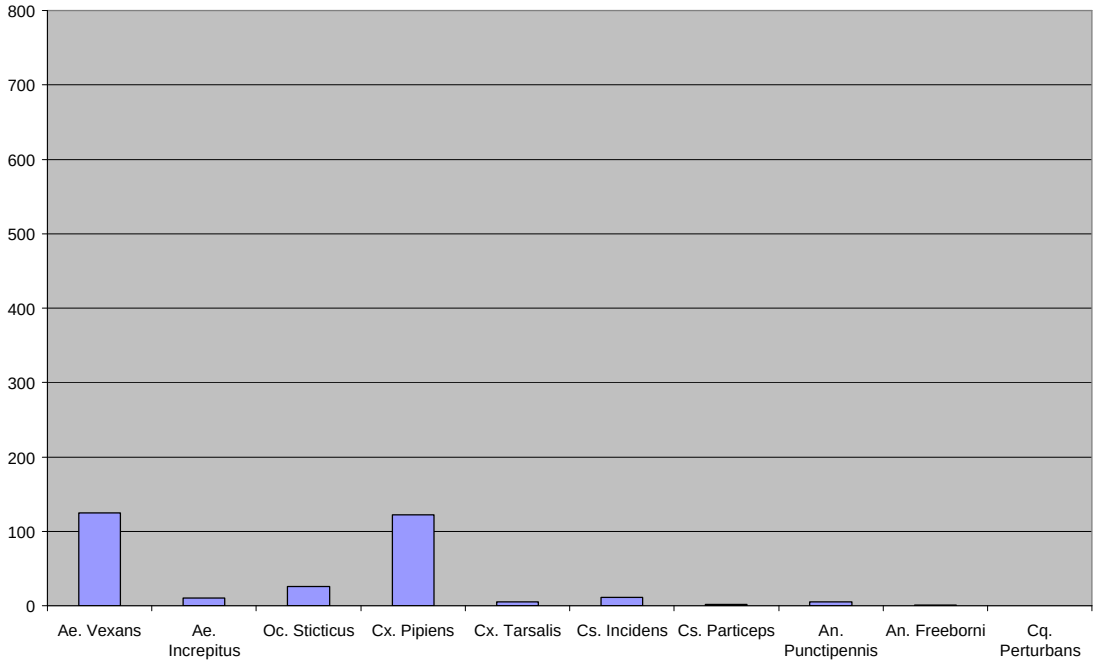
August 2004

August saw the river level dropping and beginning to stay down. There was still enough water in the floodwater areas to produce floodwater mosquitoes, but the chart shows the Culex showing up in greater numbers in August. This prompted more diligent efforts on retention ponds and the beginning of efforts to treat catch basins throughout the County.

August River Level

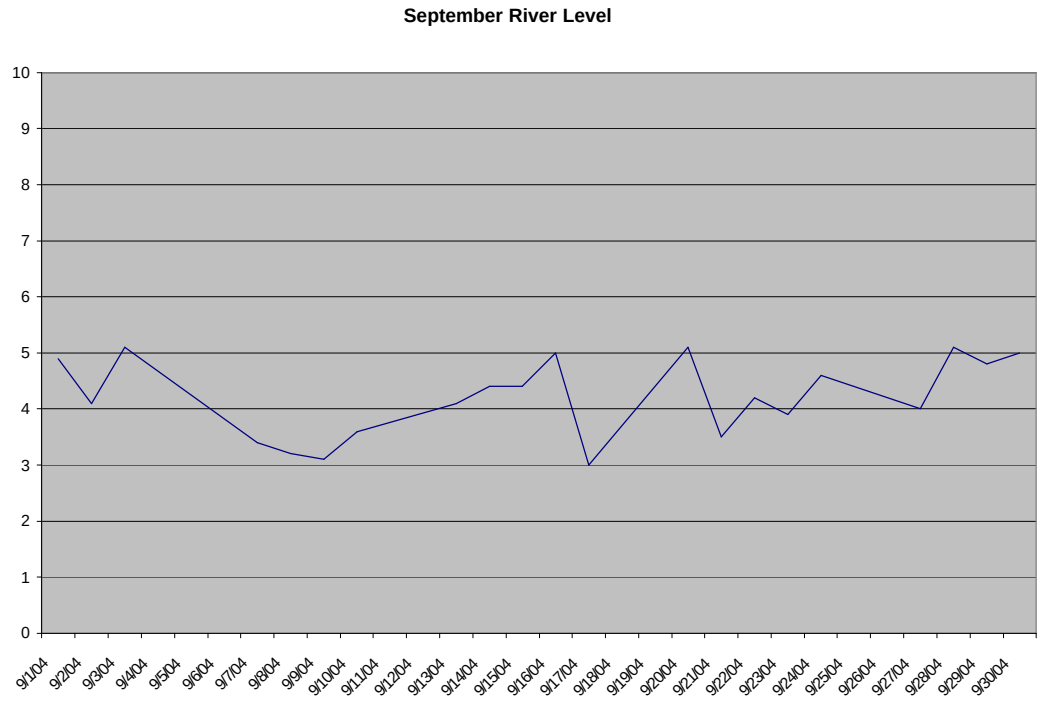


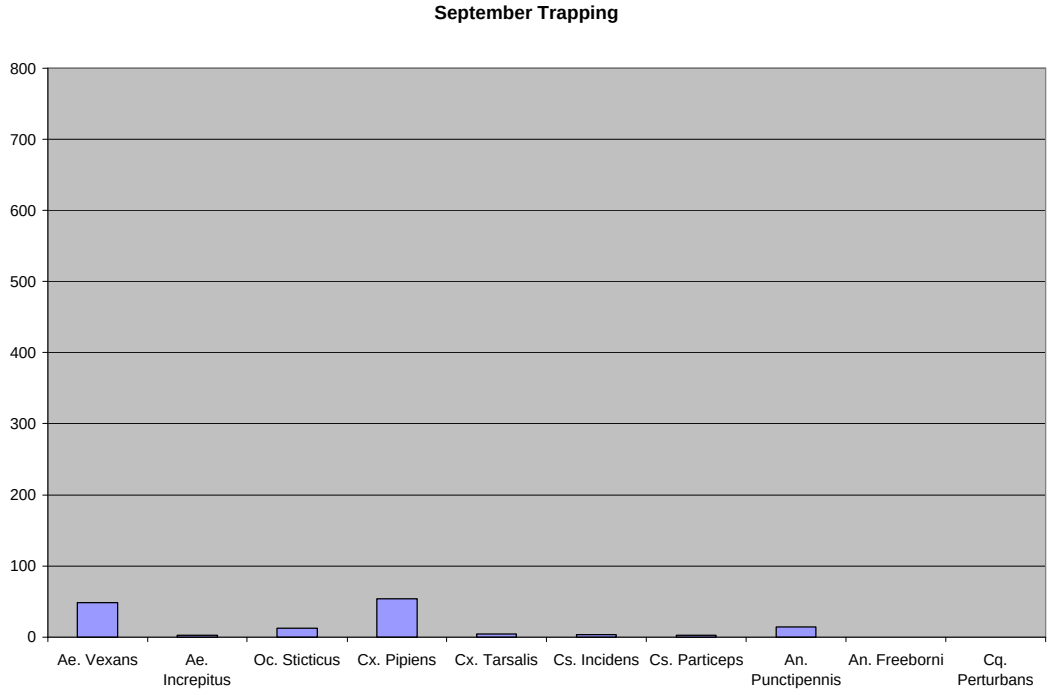
August Trapping



September 2004

September mainly brought continuation of the situation seen in August. The Culex was the major crew concern, and an all-out effort was made to treat as many catch basins as possible. The floodwater mosquito was still present and creating a nuisance in some parts of the county. These problems were addressed as the crew received reports of them, but the major concern at the end of the season was to treat areas of high Culex populations to minimize the risk of West Nile virus.





2004 Trapping Sites

Date	Area	Site	Latitude	Longitude
05/17/04	Ridgefield	Depot & 1st Streets	45° 49.533'	122° 44.878'
06/07/04	Vancouver Lake	Lakeview Golf Course	45° 40.367'	122° 41.881'
06/07/04	Vancouver Lake	Green Gate	45° 41.841'	122° 43.768'
06/07/04	Vancouver lake	Alcoa Trail	45° 39.641'	122° 44.007'
06/07/04	Vancouver Lake	LaFrambois Road	45° 39.970'	122° 43.398'
06/08/04	Ridgefield	River 'S' Unit	45° 48.508'	122° 44.849'
06/08/04	Ridgefield	Carty Unit (south)	45° 50.017'	122° 45.655'
06/08/04	Ridgefield	Carty Unit (north)	45° 50.616'	122° 46.517'
06/08/04	Ridgefield	Abrams Park	45° 49.116'	122° 44.261'
06/15/04	Salmon Creek	3618 NW Bliss Road	45° 43.584'	122° 42.500'
06/15/04	Salmon Creek	Pine Crest Golf Course	45° 43.277'	122° 41.816'
06/15/04	Salmon Creek	Salmon Creek Trail	45° 42.871'	122° 41.517'
06/15/04	Felida	Felida Moorage	45° 41.996'	122° 42.846'
06/30/04	Ridgefield	Abrams Park	45° 49.116'	122° 44.261'
06/30/04	Ridgefield	Depot & 1st Streets	45° 49.533'	122° 44.878'
06/30/04	Ridgefield	797 Sunset Lane	45° 48.606'	122° 44.196'
06/30/04	Ridgefield	3709 NW 221 Street	45° 46.873'	122° 42.551'
07/12/04	Vancouver	Marine Park	45° 36.859'	122° 37.140'
07/12/04	Vancouver	4711 Lincoln Avenue	45° 39.414'	122° 40.932'

Date	Area	Site	Latitude	Longitude
07/12/04	Vancouver	Discovery Trail (w)	45° 40.410'	122° 41.431'
07/12/04	Vancouver	Discovery Trail (e)	45° 39.703'	122° 40.337'
07/13/04	Felida	Felida Moorage	45° 41.996'	122° 42.846'
07/13/04	Salmon Creek	Salmon Creek Trail	45°42.871'	122° 41.517'
07/13/04	Salmon Creek	Pine Crest Golf Course	45° 43.277'	122° 41.816'
07/13/04	Salmon Creek	144 Street & NE 4 Avenue	45° 43.535'	122° 39.971'
07/21/04	Washougal	Steigerwald Refuge	45° 33.586'	122° 17.978'
07/21/04	Washougal	Cottonwood Beach	45° 34.073'	122° 20.479'
07/21/04	Camas	2120 NW 32 Circle	45° 36.184'	122° 25.848'
07/21/04	Vancouver	1215 NW 76 Circle	45° 40.649'	122° 41.055'
08/30/04	Felida	Felida Moorage	45° 41.996'	122° 42.846'
08/30/04	Salmon Creek	Salmon Creek Trail	45° 42.871'	122° 41.517'
08/30/04	Salmon Creek	Pine Crest Golf Course	45° 43.424'	122° 41.782'
08/30/04	Whipple Creek	Riding Trail	45° 44.583'	122° 41.532'
08/31/04	Ridgefield	Carty Unit (south)	45° 50.017'	122° 45.655'
08/31/04	Ridgefield	River "S" Unit	45° 48.508'	122° 44.849'
08/31/04	Vancouver	LaFrambois Road	45° 39.970'	122° 43.398'
08/31/04	Vancouver Lake	Green Gate	45° 41.841'	122° 43.768'
09/01/04	Washougal	Steigerwald Refuge	45° 33.586'	122° 17.978'
09/01/04	Washougal	Cottonwood Beach	45° 34.073'	122° 20.479'
09/01/04	Camas	Oak Park	45° 34.796'	122° 23.715'
09/01/04	Vancouver	Marine Park	45° 36.859'	122° 37.140'

Date	Area	Site	Latitude	Longitude
09/22/04	Ridgefield	Carty Unit (south)	45° 50.017'	122° 45.655'
09/22/04	Ridgefield	River "S" Unit	45° 47.941'	122° 45.190'
09/22/04	Felida	Felida Moorage	45° 42.436'	122° 43.243'
09/22/04	Vancouver	Discovery Trail (w)	45° 40.410'	122° 41.431'

The VecTest is a dipstick system to rapidly assay trapped mosquitoes for West Nile Virus (WNV) and Saint Louis Encephalitis (SLE). It helps monitor the presence of viruses, to aid in reducing the potential for mosquito-transmitted diseases in Clark County.

Section
3

Species Identification

2004 Sampling

Sample Date	Location	Dipsite #	Stage	Species	I.D. Date	I.D. By
04/07/04	Round Lake ditch	10008	Larva	Cx. Pipiens	04/08/04	CRS
04/07/04	Round Lake ditch	10008	Adult	Ae. Increpitus	04/14/04	CRS
04/15/04	2169 NW 22nd Avenue		Larva	Cx. Territans	04/19/04	CRS
04/19/04	5604 NW 234th Street		Larva	Cs. Incidens	04/20/04	CRS
04/21/04	NW 334th & 55th Avenue		Larva	Cs. Incidens	04/22/04	CRS
04/26/04	Winsell Farms	10017	Larva	Cx. Tarsalis	04/28/04	CRS
04/26/04	View Road		Larva	Cs. Incidens	04/28/04	CRS
04/26/04	View Road		Adult	Ae. Increpitus	04/28/04	CRS
04/27/04	2400 NW 199th Street		L & A	Cs. Incidens	04/28/04	CRS
04/30/04	4321 NW Parker	RP	Larva	Cx. Territans	05/03/04	CRS
05/03/04	36 & W Streets (Washougal)	RP		Midges	05/04/04	CRS
05/04/04	112th Avenue & 18th Street	RP	Larva	Cx. Tarsalis	05/04/04	CRS
05/04/04	5508 NE 54th Avenue	77179	Larva	Cx. Territans	05/05/04	CRS
05/04/04	W end of SE Forest	77020	Larva	Cx. Territans	05/04/04	CRS
05/04/04	4505 NE 379th Street		Larva	Cs. Incidens	05/05/04	CRS
05/04/04	14510 NW 7th Place	77003	Larva	Cx. Territans	05/05/04	CRS
05/04/04	900 NW 151st Street	RP	L & A	Cx. Pipiens	05/05/04	CRS
05/05/04	Lookout Ridge Road	RP	Larva	Cs. Incidens	05/05/04	CRS
05/05/04	Stone Ridge Road	RP	Larva	Cs. Incidens	05/05/04	CRS
05/05/04	Stone Gate Road		Larva	Cs. Incidens	05/05/04	CRS
05/05/04	NE 70th Street & Ward Road	77061	Larva	Cx. Pipiens	05/06/04	CRS
05/06/04	Camas Sewage	11011	Larva	Cx. Pipiens	05/07/04	CRS
05/06/04	8407 NE 58th Street	77219	Larva	Cx. Pipiens	05/10/04	CRS
05/07/04	Marine Park	10015	Larva	Ae. Vexans	05/17/04	CRS
05/07/04	Marine Park Condominiums		Larva	Cx. Tarsalis	05/10/04	CRS
05/07/04	Lady Island	11002	Larva	Cx. Pipiens	05/10/04	CRS
05/07/04	Vancouver Lake Island		Larva	Ae. Vexans	05/17/04	CRS
05/10/04	Morgan's Farm	14006	Larva	Ae. Vexans	05/17/04	CRS
05/10/04	LaFrambois Road	10003	Larva	Ae. Vexans	05/17/04	CRS

Sample Date	Location	Dipsite #	Stage	Species	I.D. Date	I.D. By
05/10/04	Mulligan Slough	10002	Larva	Ae. Vexans	05/17/04	CRS
05/10/04	Salmon Creek w end		Larva	Cs. Incidens	05/11/04	CRS
05/11/04	Marine Park	10015	Larva	Ae. Vexans	05/17/04	CRS
05/11/04	Green Gate (north)		Larva	Ae. Vexans	05/17/04	CRS
05/12/04	Vancouver Lake	10024	Larva	Ae. Vexans	05/17/04	CRS
05/20/04	Reed Island	15003	Larva	Oc. Sticticus	05/20/04	CRS
05/24/04	Post Office Lake	10007	Adult	Ae. Vexans	06/07/04	CRS
05/25/04	Lady Island	11003	Larva	Cx. Territans	06/04/04	CRS
05/25/04	Felida Moorage	10010	Larva	Cx. Territans	06/07/04	CRS
05/29/04	Battle Ground Sewage	12001	Larva	Cs. Incidens	06/01/04	CRS
05/26/04	Dump Station	77148	Adult	Cx. Pipiens	06/16/04	CRS
06/01/04	Lakeside Mobile Estates	10009	Larva	Ae. Vexans	06/07/04	CRS
06/02/04	3rd Street Loop (Camas)	11001	Larva	Ae. Vexans	06/07/04	CRS
06/02/04	Reed Island	15003	Larva	Oc. Sticticus	06/07/04	CRS
06/05/04	Roth Unit #1		Adult	Ae. Vexans	06/16/04	CRS
06/05/04	Roth Unit #2		Larva	Oc. Sticticus	06/07/04	CRS
06/07/04	NE 52 Circle & 145 Avenue	77075	Larva	Cx. Tarsalis	06/08/04	CRS
06/08/04	Washougal Race Track w	15001	Larva	Ae. Vexans	06/10/04	CRS
06/16/04	Washougal Race Track w	15001	Adult	Ae. Vexans	06/24/04	CRS
06/16/04	24th & Ivy Streets (Camas)		Larva	Cs. Incidens	06/18/04	CRS
06/18/04	Marine Park	10015	Adult	Ae. Cinereus	06/25/04	CRS
06/23/04	Marine Park	10015	Larva	Cx. Tarsalis	06/24/04	CRS
06/23/04	Marine Park Condominiums	10015	Larva	Cx. Pipiens	06/24/04	CRS
06/23/04	87 Avenue & 119 Street		Larva	Cs. Incidens	06/24/04	CRS
06/25/04	3010 NE 162 Avenue		Adult	Cx. Pipiens Cs. Incidens Cs. Impatiens	07/08/04	CRS
06/28/04	Lady Island	11002	Adult	Cx. Pipiens Cx. Tarsalis	07/12/04	CRS
06/29/04	4500 NW Parker Street	Washougal	Larva	Cq. Perturbans	06/30/04	CRS
06/30/04	NE 13th Street & 202 Avenue	77327	Adult	Cx. Pipiens	07/12/04	CRS
07/01/04	NE 167 Avenue & 20 Street		Larva	Cx. Pipiens	07/07/04	CRS
07/01/04	2610 NE 164 Street	77329	Larva	Cx. Pipiens	07/07/04	CRS
07/01/04	NE 162 Avenue & 28 Street	77330	Larva	Cs. Incidens	07/07/04	CRS
			Adult	Cx. Pipiens	07/09/04	CRS
07/02/04	LaCamas Conference Center		Adult	Cx. Pipiens	07/09/04	CRS
07/02/04	710 NE 42 Circle	Washougal	Larva	Cx. Pipiens	07/07/04	CRS
07/02/04	717 SE Everett Street	Camas	Larva	Cs. Incidens	07/07/04	CRS
07/07/04	NE Garden Drive & 186 Place	77319	Larva	Cs. Incidens	07/08/04	CRS

Sample Date	Location	Dipsite #	Stage	Species	I.D. Date	I.D. By
07/08/04	2143 NW 32 Circle	Camas rp	Larva	Cs. Incidens	07/08/04	CRS
07/14/04	Mill Pond (Washougal)	15008	Larva	Cx. Pipiens	07/15/04	CRS
07/14/04	4700 Rolling Meadows	77082	Larva	Cx. Pipiens	07/15/04	CRS
07/14/04	1014 NE 42 Street	77083	Larva	Cs. Incidens	07/15/04	CRS
				Cx. Pipiens		
07/14/04	1600 N 10 Drive	Camas	Larva	Cx. Pipiens	07/15/04	CRS
07/14/04	Washougal Sewage	15007	L & A	Cx. Pipiens	07/21/04	CRS
07/15/04	35 Circle at Sierra Drive	Camas	Larva	Cx. Pipiens	07/19/04	CRS
				Cs. Incidens		
07/15/04	2500 NW Sierra Street	Camas	L & A	Cx. Pipiens	07/21/04	CRS
07/15/04	NE 59 Street & 49 Avenue	CB	Larva	Cx. Pipiens	07/21/04	CRS
07/19/04	SE 13 Street & 4 Avenue	BG	Larva	Cs. Incidens	07/20/04	CRS
07/19/04	SE 12 Street & 9 Avenue	BG	Larva	Cs. Incidens	07/20/04	CRS
				Cx. Pipiens		
07/19/04	SW 2 Place & 199 Street	BG	Larva	Cx. Tarsalis	07/20/04	CRS
				An. Punctipennis		
07/15/04	3630 NW Maryland	Camas	Larva	Cx. Pipiens	07/20/04	CRS
				Cx. Tarsalis		
				Cs. Incidens		
07/19/04	13913 NE 199 Street	BG	L & A	Cx. Pipiens	07/28/04	CRS
07/20/04	1350 NE 17th Avenue	BG	Larva	Cx. Pipiens	07/21/04	CRS
				Cx. Tarsalis		
				Cs. Incidens		
07/21/04	Camas Sewage	11011	Larva	Cx. Pipiens	07/22/04	CRS
07/21/04	1211 NW 20 Avenue	BG	Larva	Cx. Pipiens	07/22/04	CRS
07/21/04	2502 SW 4th Way	BG	Larva	Cx. Pipiens	07/22/04	CRS
07/21/04	9th St. & 12th Avenue	BG	Larva	Cx. Territans	07/22/04	CRS
07/23/04	2110 NW 32 Circle	77388	L & A	Cx. Pipiens	07/29/04	CRS
07/26/04	2914 NW Leadbetter	77397	Larva	Cx. Pipiens	07/28/04	CRS
				Cx. Tarsalis		
07/26/04	2833 NW 37 Street	77392	Larva	Cx. Pipiens	07/28/04	CRS
07/27/04	1534 NW 41 Circle	Camas	Larva	Cs. Incidens	07/28/04	CRS
07/27/04	1614 NW Sierra Drive	77398	Larva	Cx. Pipiens	07/28/04	CRS
				Cs. Incidens		
07/27/04	NW 25 Place & 3 Way	BG	Larva	Cx. Pipiens	07/28/04	CRS
07/27/04	SW 20 Avenue & 11 Street	BG	Larva	Cx. Pipiens	07/28/04	CRS
07/27/04	SW 24 Avenue & 8 Street	BG	Larva	Cx. Pipiens	07/28/04	CRS
07/27/04	407 NW 136 Way	BG	L & A	Cx. Pipiens	07/30/04	CRS
				Cs. Incidens		
07/28/04	2431 NW Logan Street	77383	Larva	Cq. Perturbans	07/29/04	CRS

Sample Date	Location	Dipsite #	Stage	Species	I.D. Date	I.D. By
07/29/04	4801 NW Parker	77404	Larva	Cx. Territans An. Punctipennis	07/30/04	CRS
07/29/04	4500 NW Parker	77357	Larva	Cx. Tarsalis	07/30/04	CRS
08/02/04	1125 NW 22 Avenue	77420	Larva	Cs. Incidens	08/04/04	CRS
08/02/04	859 NW 19th Avenue	77422	Larva	Cx. Pipiens	08/04/04	CRS
08/02/04	2033 NW Ione Street	77423	Larva	Cx. Pipiens Cs. Incidens	08/04/04	CRS
08/04/04	NW 107 Circle	CB	Larva	Cx. Pipiens	08/05/04	CRS
08/04/04	1300 NW Eagle Street	Camas	Larva	Cx. Pipiens	08/05/04	CRS
08/04/04	1357 NW Eagle Street	Camas	Larva	Cs. Incidens	08/05/04	CRS
08/05/04	NE 48 Street & 38 Avenue	CB	Larva	Cx. Pipiens	08/06/04	CRS
08/05/04	Lady Island	11002	Larva	Cx. Pipiens	08/06/04	CRS
08/06/04	Washougal Sewage	15006	Larva	Cx. Territans	08/09/04	CRS
08/06/04	33rd & "Y" Street	77356	Larva	Cx. Pipiens Cs. Incidens	08/09/04	CRS
08/06/04	4700 Rolling Meadows	77082	Larva	Cx. Territans Cs. Incidens An. Punctipennis	08/09/04	CRS
08/06/04	SE 50 Avenue & P Street	Washougal	Adult	Cx. Pipiens	08/13/04	CRS
08/06/04	5100 Sunset View Road	77111	Larva	Cs. Incidens	08/09/04	CRS
08/16/04	Lakeview Golf Course	10045	Larva	Cx. Tarsalis	08/18/04	CRS
08/16/04	SW area catch basins	88100	Larva	Cx. Pipiens	08/23/04	CRS
08/17/04	324 NE 105 Street		Adult	Cx. Pipiens	08/27/04	CRS
08/18/04	1600 Forest Home Road	77440	Larva	Cx. Territans An. Punctipennis	08/23/04	CRS
08/19/04	7701 NE 182 Avenue	77442	Larva	Cs. Incidens An. Punctipennis	08/23/04	CRS
08/20/04	Lark Drive & Heron Drive	Ridgefield	Larva	Cx. Pipiens Cs. Incidens	08/23/04	CRS
08/23/04	Washougal mill pond	15008	Larva	Cx. Pipiens	08/24/04	CRS
09/03/04	East Sewage	10013	Larva	Cx. Pipiens	09/07/04	CRS
09/08/04	Carty Unit	14020	Larva	Cs. Incidens	09/10/04	CRS
			Adult	Ae. Vexans	09/16/04	CRS
09/09/04	LaCenter	CB	Larva	Cx. Pipiens	09/10/04	CRS
09/14/04	Carty Unit	14017	Adult	Oc. Sticticus	09/15/04	CRS
09/14/04	21616 NE 72nd Avenue	RP	Larva	Cs. Incidens Cx. Pipiens	09/15/04	CRS
09/14/04	Heron Lake & Lark Drive	77431	Larva	Cs. Incidens Cx. Pipiens	09/15/04	CRS

Section
4

West Nile Virus Testing

2004 Clark County Testing Summary

Date	Location of Sample	Species Tested	Number	Test Results
06/08/04	RWR River "S" Unit	Cx. Tarsalis	17	Negative
06/15/04	Pine Crest Golf Course	Cx. Pipiens	10	Negative
06/15/04	Salmon Creek Trail	Cx. Tarsalis	10	Negative
06/30/04	3709 NW 221 Street, Ridgefield	Cx. Pipiens	7	Negative
07/12/04	Marine Park, Vancouver	Cx. Pipiens	15	Negative
07/12/04	Discovery Trail (west end)	Cx. Tarsalis	10	Negative
07/12/04	Discovery Trail @ Alki Road	Cx. Tarsalis	10	Negative
07/13/04	Salmon Creek Trail	Cx. Tarsalis	11	Negative
07/13/04	144th Street & 4th Avenue	Cx. Pipiens	12	Negative
07/21/04	Steigerwald Refuge	Cx. Tarsalis	15	Negative
07/21/04	2120 NW 32 Circle, Camas	Cx. Pipiens	20	Negative
07/21/04	1215 NW 76 Circle, Vancouver	Cx. Pipiens	10	Negative
08/30/04	Felida Moorage	Cx. Pipiens	10	Negative
08/31/04	Carty Unit (south)	Cx. Pipiens	14	Negative
08/31/04	Carty Unit (south)	Ae. Vexans	13	Negative
08/31/04	LaFrambois Road	Cx. Pipiens	20	Negative
08/31/04	Green Gate (Vancouver Lake)	Cx. Pipiens	9	Negative
08/31/04	Green Gate (Vancouver Lake)	Ae. Vexans	15	Negative
09/01/04	Steigerwald Refuge	Cx. Pipiens	12	Negative
09/01/04	Steigerwald Refuge	An. Punctipennis	12	Negative
09/01/04	Oak Park (Camas)	Cx. Pipiens	14	Negative
09/01/04	Marine Park, Vancouver	Cx. Pipiens	11	Negative

2004 Washington State Department of Health Testing Summary

Reported to Washington State Department of Health as of November 17, 2004

County	Horses* Tested	Horses* Positive	Birds** Tested	Birds** Positive	Sentinel Flocks*** Tested	Sentinel Flocks*** Positive	Mosquito Pools**** Tested	Mosquito Pools**** Positive
Adams	0	0	3	0	0	0	0	0
Asotin	0	0	1	0	0	0	0	0
Benton	0	0	18	0	311	0	84	0
Chelan	1	0	6	0	0	0	0	0
Clallam	0	0	5	0	0	0	0	0
Clark	1	0	54	0	0	0	22	0
Columbia	0	0	0	0	0	0	0	0
Cowlitz	1	0	25	0	0	0	26	0
Douglas	0	0	0	0	0	0	0	0
Ferry	0	0	0	0	0	0	0	0
Franklin	4	0	3	0	0	0	0	0
Garfield	0	0	0	0	0	0	0	0
Grant	0	0	4	0	0	0	0	0
Grays Harbor	0	0	5	0	0	0	0	0
Island	3	0	23	0	0	0	0	0
Jefferson	1	0	6	0	0	0	53	0
King	3	0	93	0	0	0	5	0
Kitsap	1	0	0	0	0	0	241	0
Kittitas	0	0	5	0	0	0	0	0
Klickitat	1	0	2	0	0	0	0	0
Lewis	0	0	19	0	0	0	0	0
Lincoln	0	0	1	0	0	0	0	0
Mason	0	0	14	0	0	0	0	0
Okanogan	0	0	2	0	0	0	0	0
Pacific	0	0	6	0	0	0	0	0
Pend Oreille	0	0	0	0	0	0	0	0
Pierce	2	0	57	0	0	0	227	0
San Juan	0	0	6	0	0	0	0	0
Skagit	0	0	16	0	0	0	0	0
Skamania	1	0	5	0	0	0	0	0
Snohomish	3	0	92	0	0	0	32	0
Spokane	6	0	14	0	0	0	0	0
Stevens	1	0	8	0	0	0	0	0
Thurston	1	0	38	0	0	0	0	0
Wahkiakum	0	0	0	0	0	0	0	0
Walla Walla	5	0	5	0	0	0	0	0
Whatcom	2	0	10	0	0	0	0	0
Whitman	1	0	2	0	0	0	0	0
Yakima	1	0	3	0	81	0	139	0

* An additional 14 equine tested negative, but are not included in the table because county/state information was not available.

****** A total of 571 birds were submitted for testing; 19 of those were unsuitable and not tested for West Nile virus.